APRIL/MAY 2023

FBC21/CBC21 — BIOMOLECULES

Shanmuga Industries Arts & Science College
T.V.Malai

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define aldoses and ketoses sugars.

2. Show the reducing and non-reducing sugar.

3. Why amino acids are in amphoteric in nature.

4. Show the aromatic amino acids.

5. Spell out the role of peptide.

6. Explain term the Salting in and out.

7. List the various nucleotides.

8. Summarize the types of RNA.

9. What is Reichert Meissl number?

10. Explain the Essential fatty acids.

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SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Organize the structural features of starch and list out the importance of it.

Or

(b) Examine why sucrose is called as invert sugar.

12. (a) Identify the reason why Amino acids are amphoteric in nature.

Or

(b) Analyze the chemical reaction of Ninhydrin with amino acid.

13. (a) Organize the determination of N terminal end in amino acid.

Or

(b) Analyze the salient features of secondary structure of proteins.

14. (a) Identify the functions of bile acid and salts.

Or

(b) Categorize the classification of lipids.

15. (a) Organize the structure of tRNA.

Or

(b) Distinguish between DNA and RNA.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain the classification of carbohydrates with suitable example.

17. Deduce the classification of amino acid based on its structure.

18. Explain how will you classify the proteins based on their functions?

19. Elaborately discuss the double helical structure of DNA.

20. Discuss the structure and functions of phospholipids.